

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

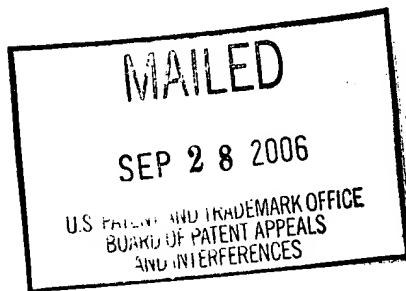
## UNITED STATES PATENT AND TRADEMARK OFFICE

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### BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

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Ex parte RICHARD W. ARNOLD, WELDON BEARDAIN, DANIEL W. PREVEDEL,  
DONALD E. RILEY, and LESTER L. WILSON



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Appeal No. 2006-2464  
Application No. 09/164,580

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ON BRIEF

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Before JERRY SMITH, RUGGIERO, and HOMERE, Administrative Patent Judges.

JERRY SMITH, Administrative Patent Judge.

### DECISION ON APPEAL

This is a decision on the appeal under 35 U.S.C. § 134 from the examiner's rejection of claims 9, 10, 13, 14 and 22-31. Claims 1-4 have been indicated by the examiner to contain allowable subject matter. Claims 5-8 have been cancelled. The appeal to dependent claims 11, 12, 15 and 16 has been withdrawn by appellants [see second appeal brief, filed April 7,

2003]. Claims 17-21 were withdrawn responsive to a restriction requirement and have been cancelled. Therefore, claims 1-4, 9-16 and 22-31 are pending.

The disclosed invention pertains to a known good die using existing process infrastructure.

Representative claims 9 and 22 are reproduced as follows:

9. An interconnecting layer for use in a semiconductor package which comprises;
  - (a) an electrically insulating layer;
  - (b) electrically conductive paths on said layer, each of said paths having first and second spaced apart regions thereon, said second spaced apart region of each of said paths having a compliant bump having a height greater than all other structures on said layer; and
  - (c) a standoff disposed on said layer and having a height above said layer and less than said bump.
  
22. An apparatus adaptable for the testing of semiconductor devices comprising:
  - a package; and

- an interconnecting medium contained within said package having electrical paths adaptable for coupling to test circuitry, wherein said interconnecting medium includes a medium surface, a plurality of standoffs affixed to said medium surface, and a plurality of probe tips affixed to said medium surface, said probe tips adaptable for making electrical contact with pads on said semiconductor device, wherein said probe tips are compliant bump probe tips.

The examiner relies on the following references:

Potter	6,028,437	Feb. 22, 2000
	(filed	May 19, 1997)
Knight et al. (Knight)	6,728,113	Apr. 27, 2004
	(filed	Jun. 24, 1993)

The examiner has provided the following additional references as extrinsic evidence to support a finding that a "spacer" is interchangeable with a "standoff" as known to those of ordinary skill in the art at the time of the invention:

Chao et al. (Chao)	5,633,535	May 27, 1997
Spielberger et al. (Spielberger)	6,005,778	Dec. 21, 1999
	(filed	Jul. 29, 1996)

The following rejections are on appeal before us:

1. Claims 9, 10, 13 and 14 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Knight [answer, page 4].
2. Claims 22-31 stand rejected under 35 U.S.C. § 102(b) as being clearly anticipated by Potter [answer, page 5].

Rather than repeat the arguments of appellants or the examiner, we make reference to the briefs and the answer for the respective details thereof.

We have carefully considered the subject matter on appeal, the rejections advanced by the examiner and the evidence of anticipation relied upon by the examiner as support for the rejections. We have, likewise, reviewed and taken into consideration, in reaching our decision, the appellants' arguments set forth in the briefs along with the examiner's rationale in support of the rejections and arguments in rebuttal set forth in the examiner's answer. Only those arguments actually made by appellants have been considered in this decision. Arguments which appellants could have made but chose not to make in the briefs have not been considered and are deemed to be waived. See 37 C.F.R. § 41.37(c)(1)(vii)(2004). See also In re Watts, 354 F.3d 1362, 1368, 69 USPQ2d 1453, 1458 (Fed. Cir. 2004).

It is our view, after consideration of the record before us, that the evidence relied upon by the examiner does not support the examiner's rejection of claims 9, 10, 13, 14 and 22-31. Accordingly, we reverse.

In rejecting claims under 35 U.S.C. § 102, a single prior art reference that discloses, either expressly or inherently, each limitation of a claim invalidates that claim by anticipation. Perricone v. Medicis Pharmaceutical Corp., 432 F.3d 1368, 1375-6, 77 USPQ2d 1321, 1325-6 (Fed. Cir. 2005), citing Minn. Mining & Mfg. Co. v. Johnson & Johnson Orthopaedics, Inc., 976 F.2d 1559, 1565, 24 USPQ2d 1321, 1326 (Fed. Cir. 1992). To establish inherency, the extrinsic evidence "must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill." Continental Can Co. v. Monsanto Co., 948 F.2d 1264, 1268, 20 USPQ2d 1746, 1749 (Fed. Cir. 1991). "Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient." In re Robertson, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999) (internal citations omitted). To anticipate, every element and limitation of the claimed invention must be found in a single prior art reference, arranged as in the claim. Karsten Mfg. Corp. v. Cleveland Golf Co., 242 F.3d 1376, 1383, 58 USPQ2d 1286, 1291 (Fed. Cir. 2001); Scripps Clinic & Research Foundation

v. Genentech, Inc., 927 F.2d 1565, 1576, 18 USPQ2d 1001, 1010 (Fed. Cir. 1991). Anticipation of a patent claim requires a finding that the claim at issue “reads on” a prior art reference. Atlas Powder Co. v. Ireco, Inc., 190 F.3d 1342, 1346, 51 USPQ2d 1943, 1945 (Fed Cir. 1999) (“In other words, if granting patent protection on the disputed claim would allow the patentee to exclude the public from practicing the prior art, then that claim is anticipated, regardless of whether it also covers subject matter not in the prior art.”) (internal citations omitted).

I. We consider first the examiner’s rejection of claims 9, 10, 13 and 14 as being anticipated by Knight.

**As per independent claim 9:**

Appellants note that claim 9 requires a standoff disposed on the layer and having a height above the layer and less than the bump [brief, page 4; claim 9, emphasis added]. Appellants argue that Knight fails to teach the structure of claim 9 [brief, page 4].

The examiner disagrees [answer, page 5]. The examiner asserts that Knight explicitly discloses spacers that function to provide separation between materials (at col. 16, lines 59-60) [id.]. The examiner further asserts that the term spacers and/or standoffs are used interchangeably in

the art in reference to a structure capable of providing separation between materials [*id.*]. The examiner proffers extrinsic evidence that the terms “spacer” and “standoff” are used interchangeably in the art [*id.*]. Specifically, the examiner points to Spielberger at col. 3, lines 22-26 (i.e., “the standoff or spacer function” shown as spacer 30 in fig. 1) and Chao’s abstract (i.e., see “standoff spacer”) [*id.*].

In the reply brief appellants further argue that the examiner has failed to show a correlation in Knight between what the examiner alleges is Knight’s “bump” and the “spacer” the examiner alleges corresponds to the claimed “standoff” [reply brief, page 3, ¶2]. Appellants conclude that the examiner has failed to set forth a proper *prima facie* case of anticipation [*id.*].

We begin by noting that the section of Knight relied upon by the examiner for teaching the claimed “standoff” actually discloses spacers that are “not required unless shorting is a risk” [emphasis added]. See col. 16, lines 59 and 60:

Spacers on the chip surface could assure constant separation in the presence of a high dielectric liquid like glycerol but are not required unless shorting is a risk [emphasis added].

In particular, we note that Knight’s disclosure does not arrange the disclosed spacer in a physical coupling with the particular layer the examiner

relies upon as having “electrical conductive paths on said layer” [see answer, page 4; see Knight, fig. 5 - see Knight’s power substrate 70 layer relied upon by the examiner in the rejection]. Instead, we find that Knight clearly teaches that such spacers, if used at all, would be disposed in the presence of a high dielectric liquid, such as between the half-capacitor plates shown in fig. 5 (i.e., in the same space occupied by dielectric 17 in fig. 5) [see Knight, col. 16, lines 26 and 27, i.e., “dielectric 17 is a high dielectric factor fluid, such as ethylene glycol”]. We further note that in the rejection the examiner admits that the spacer is not shown in Knight’s figure 5 [answer, page 4].

We note that the Court of Appeals for the Federal Circuit has repeatedly reaffirmed that anticipation under Section 102 requires “the presence in a single prior art disclosure of all elements of a claimed invention arranged as in that claim.” Panduit Corp. v. Dennison Manufacturing Co., 774 F.2d 1082, 1101, 227 USPQ 337, 350 (Fed. Cir. 1985) (quoting Connell v. Sears, Roebuck & Co., 722 F.2d 1542, 1548, 220 USPQ 193, 198 (Fed. Cir. 1983)) [emphasis added]. See also Karsten Mfg. Corp. v. Cleveland Golf Co., 242 F.3d at 1383, 58 USPQ2d at 1291; Scripps Clinic & Research Foundation v. Genentech, Inc., 927 F.2d at 1576, 18 USPQ2d at 1010.



In the instant case, even assuming arguendo that a spacer is equivalent to a standoff (as argued by the examiner), we do not find that Knight's disclosure of a "spacer" meets the language of the claim that specifically requires: "a standoff disposed on said layer and having a height above said layer and less than said bump." [claim 9]. Specifically, we find that Knight fails to show a physical coupling between the disclosed spacer (col. 16, line 59) and the particular layer (i.e., power substrate 70, fig. 5) that the examiner relies upon in the rejection. We agree with appellants that Knight's disclosure of a spacer fails to place the spacer (i.e., "standoff") "disposed on said layer" as required by the language of the claim. Therefore, we conclude that Knight does not teach the same arrangement of elements operatively coupled as claimed. Accordingly, we will reverse the examiner's rejection of representative claim 9.

**As per dependent claims 10, 13 and 14:**

Because dependent claims 10, 13 and 14 each include the limitations of independent claim 9, we will also reverse the examiner's anticipation rejection of these claims.

II. We consider next the examiner's rejection of claims 22-31 as being clearly anticipated by Potter. Since Appellants' arguments with respect to

this rejection have treated these claims as a single group which stand or fall together, we will select independent claim 22 as the representative claim for this rejection because it is the broadest independent claim from this group. See 37 C.F.R. § 41.37(c)(1)(vii)(2004).

At the outset, we note that the examiner has rejected claims 22-31 as being clearly anticipated under 35 U.S.C., § 102(b). The rejection under § 102(b) is shown on page 5 of the answer and also on page 3 of the non-final office action (mailed Aug. 5, 2004) that preceded the examiner's answer. We note that appellants have copied claims 1-8, 10 and 11 from the Potter patent as instant claims 22-31, respectively, for the purpose of provoking an interference. We note that the instant application filing date is Oct. 1, 1998 with a claim for priority under 35 USC § 119(e)(1) of provisional application No. 60/060,800, filed October 3, 1997 [see instant specification, page 1]. In particular, we note that the patent to Potter was filed on May 19, 1997 and issued on Feb. 22, 2000. Therefore, we find that the Potter patent is not available as a reference under § 102(b) because the patent does not meet the statutory requirement of being patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States. 35 U.S.C., § 102(b).

Accordingly, we will pro forma reverse the examiner's rejection of claims 22-31 as being anticipated under 35 U.S.C. § 102(b).

However, we note that earlier in the prosecution history the examiner rejected instant claims 22-31 as being anticipated by Potter under § 102(e) [see final rejection, mailed Feb. 25, 2002]. We note that appellants subsequently filed an after-final amendment (not entered) and a first appeal brief [see brief filed July 29, 2002]. We note that the examiner responded to the first appeal brief by reopening prosecution and rejecting instant claims 22-31 as being anticipated by Potter under § 102(b) (i.e., the same rejection that is now before us) [see non final rejection mailed Aug. 5, 2004, page 3]. We further note that appellants filed a 37 C.F.R. § 1.131 declaration (on Nov. 15, 2001) asserting a date of invention prior to the May 19, 1997 filing date of the patent to Potter.

As pointed out by the examiner, we note that under 37 C.F.R. § 1.131(a)(1), a declaration may not be used to establish prior invention where the rejection is based upon a U.S. patent to another that claims the same patentable invention, as shown infra:

- (a) Prior invention may not be established under this section if either:
  - (1) The rejection is based upon a U.S. patent or U.S. patent application publication of a pending or patented application to another or others which claims the same patentable invention as defined in § 41.203(a) of this title, in which case an applicant may suggest an interference pursuant to § 41.202(a) of this title; or
  - (2) The rejection is based upon a statutory bar.

We also note MPEP § 2305 specifically addresses the issue of when a RULE 131 affidavit is permitted, as shown infra:

#### I. RELATIONSHIP TO 37 CFR 1.131 AFFIDAVIT

Ordinarily an applicant may use an affidavit of prior invention under 37 CFR 1.131 to overcome a rejection under 35 U.S.C. 102(a) or 102(e). An exception to the rule arises when the reference is a patent or application published under 35 U.S.C. 122(b) and the reference has claims directed to the same patentable invention as the application claims being rejected. 37 CFR 1.131(a)(1). The reason for this exception is that priority is determined in an interference when the claims interfere. 35 U.S.C. 135(a). In such a case, the applicant must make the priority showing under 37 CFR 41.202(d) instead. In determining whether a 37 CFR 1.131 affidavit is permitted or not, the examiner should keep the purpose of the exception in mind. If an interference would not be possible at the time the affidavit would be submitted, then the affidavit should be permitted. This situation could arise two ways.

First, the claims that matter for the purposes of 37 CFR 1.131 are not the published claims but the currently existing claims. For example, if the claims that were published in a published application have been significantly modified during subsequent examination, they may no longer interfere with the rejected claims. Similarly, the patent claims may have been subsequently corrected or amended in a reissue application or a reexamination. Since an interference no longer exists between the current claims in the patent or published application and the rejected claims, an affidavit under 37 CFR 1.131 may be submitted.

Similarly, if a published application contains claims to the same invention, but the claims in the published application are not in condition for allowance, then no interference is yet possible. 37 CFR 41.102. Since the claims in the published application might never be allowed in their present form, it is not appropriate to proceed as though an interference would be inevitable. Consequently, an affidavit under 37 CFR 1.131 may be submitted.

Accordingly, we find that the RULE 131 affidavit of record cannot be used to antedate the patent to Potter because the Potter reference has claims directed to the same patentable invention as instant rejected claims 22-31 [See RULE 131 affidavit filed Nov. 15, 2001]. The record before us

indicates that one of the following two courses of action are required by the examiner:

1. An interference should be declared in view of instant claims 22-31 copied by appellants from the Potter patent, OR,
2. Prosecution should be reopened rejecting claims 22-31 on some appropriate basis besides the patent to Potter.

We note that in the long prosecution history of this case (including the filing of three appeal briefs) the examiner has thus far refused to declare an interference. We note that the examiner asserts that appellants have failed to meet the requirements set forth under 37 C.F.R. § 1.608 [see non-final rejection mailed Aug. 5, 2004, pages 4 and 5]. We further note that appellants argue in the reply brief that they have met all the requirements set forth under 37 C.F.R. § 1.608 [page 4]. Appellants further argue that the RULE 131 declaration provides at least a rebuttable prima facie case that appellants had in their possession the invention of Potter prior to the filing date of Potter [id.].

In response, we note that the Board exercises no general supervisory power over the examining corps. The question of whether to declare an interference is not within our jurisdiction. Decisions within the primary examiner's discretion, such as whether or not to declare an interference, are not subject to our review. See In re Berger, 279 F.3d 975, 984-85, 61

USPQ2d 1523, 1529 (Fed. Cir. 2002) (issue of examiner's refusal to enter amendment after final may be the subject of a petition, but may not be reviewed by the Board in connection with a rejection of claims). In the instant case, we note that an examiner's refusal to initiate an interference is a petitionable matter to the Director of the examiner's Technical Center. See MPEP §1002.02(c)(3)(e). See also 37 C.F.R. §§ 1.181(a) and (b).

Nevertheless, we note that the suggestion for an interference may come from an applicant or from an examiner. See MPEP § 2304. In the case of an applicant suggesting an interference, we note that 37 C.F.R. § 1.607 has been superseded by 37 C.F.R. § 41.202, as shown infra. See MPEP § 2304.02 [Eighth Edition, Latest Revision August 2006]:

**37 CFR 41.202 Suggesting an interference.**

(a) *Applicant*. An applicant, including a reissue applicant, may suggest an interference with another application or a patent. The suggestion must:

- (1) Provide sufficient information to identify the application or patent with which the applicant seeks an interference,
- (2) Identify all claims the applicant believes interfere, propose one or more counts, and show how the claims correspond to one or more counts,
- (3) For each count, provide a claim chart comparing at least one claim of each party corresponding to the count and show why the claims interfere within the meaning of § 41.203(a),
- (4) Explain in detail why the applicant will prevail on priority,
- (5) If a claim has been added or amended to provoke an interference, provide a claim chart showing the written

description for each claim in the applicant's specification,  
and

- (6) For each constructive reduction to practice for which the applicant wishes to be accorded benefit, provide a chart showing where the disclosure provides a constructive reduction to practice within the scope of the interfering subject matter.

We note that regardless of whether the suggestion for an interference comes from an applicant or from an examiner, the examiner must consult with an Interference Practice Specialist, who may then refer the suggested interference to the Board of Patent Appeals and Interferences. See MPEP § 2304. We note that MPEP § 2302 requires examiners to be proficient in identifying potential interferences and to consult with an Interference Practice Specialist in each Technical Center who must approve any referral of a suggested interference to the Board. We further note that the referral must include a completed Form PTO-850, which either an Interference Practice Specialist or a Director of the examiner's Technical Center must sign. See MPEP § 2302. In the instant case, we can find no evidence of record that the examiner has consulted with an Interference Practice Specialist in accordance with the procedure set forth under MPEP § 2302.

Accordingly, we remand this application to the examiner to promptly consult with an Interference Practice Specialist in the examiner's Technical Center to determine from the evidence of record whether an interference

should be declared. In light of the fact that this application has been pending before the Office for almost eight years, including three appeal briefs of record, the determination as to whether an interference should be declared should be performed with special dispatch. In the event that the Interference Practice Specialist determines that an interference should not be declared, we leave it to the examiner to decide whether to reopen prosecution with a rejection of claims 22-31 as being anticipated by Potter under 35 U.S.C. § 102(e).

Lastly, we note that appellants have literally copied instant claims 22-31 from Potter to provoke an interference. As a result, we note that instant dependent claim 27 now depends upon instant allowed claim 4 and instant dependent claim 28 now improperly depends upon instant cancelled claim 5. Thus, in the rejection before us, the examiner has rejected dependent claim 27 as being clearly anticipated by Potter, while at the same time dependent claim 27 is actually allowable by virtue of depending upon allowed claim 4. We leave it to the examiner to address these issues on remand.



In summary, we will not sustain the examiner's rejection of any claims under appeal. Therefore, the decision of the examiner rejecting claims 9, 10, 13, 14 and 22-31 is reversed.

REVERSED AND REMANDED.

*Jerry Smith*

Jerry Smith  
Administrative Patent Judge

*Joseph F. Ruggiero*

Joseph F. Ruggiero  
Administrative Patent Judge

*Jean R. Homere*

Jean R. Homere  
Administrative Patent Judge

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